

REMARKS:

Claims 1-19 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the Applicants regard as being their invention. More specifically, the Examiner has taken the position that the term "phr" is not art recognized, is undefined by the specification and is therefore unclear. At page 14, lines 9-10 of the originally filed specification, the term "phr" is identified as being "parts per hundred parts of rubber by weight." However, the term "phr" was not defined in the Abstract or in the specification at the point where it was used in the first instance. Accordingly, the Abstract and page 5 of the specification have been amended so as to define the term "phr" in the same manner as it is later defined at page 14, lines 9-10 of the originally filed specification.

The Examiner further indicated that the term "particle size" is unclear since particle sizes exist as a distribution and therefore particle size will vary depending, for instance, on whether the particle size is a number or weight average. However, the particle sizes called for in the claims are particle size ranges rather than being average particle sizes. Accordingly, the range of 30 nm to 500 nm called for in claim 1 indicates that the particle size of the pre-crosslinked polymer particles will fall within this range. Accordingly, 30 nm is the lower limit of the particles in the particle size distribution with 500 nm being the upper limit of the particles in the particle size distribution. In other words, claim 1 calls for pre-crosslinked polymer particles having a size that falls within the range of 30 nm to 500 nm. The Examiner has also indicated that the molecular weights of the cross-linked polymers called for in claims 8 and 9 are of no meaning because the polymer chains have been cross-linked. To overcome this basis of rejection, claims 8 and 9 have been canceled.

Claims 1-12, 14, and 15 have been rejected under 35 U.S.C. 102 (a) as being anticipated by or, in the alternative, 35 U.S.C. §103(a) as being obvious over the teachings of Castner (United States Patent 6,780,937). However, the invention being claimed in the subject patent application has been amended to be further distinguished from the teachings of Castner. More specifically, claim 1 has been amended to call for the rubber composition being claimed to also include carbon black or silica as a filler, and for the pre-crosslinked polymer to be in the form of

core-shell particles. This is in contrast to the teachings of Castner wherein the polymer particles are used as a replacement for reinforcing fillers such as carbon black and silica. The teachings of Castner do not disclose or suggest the possibility of utilizing carbon black or silica in combination with the polymer particles described therein. The teachings of Castner can also be distinguished from the invention now being claimed on the basis that the polymer particles of Castner contain at least 70 percent vinyl aromatic units. Vinyl aromatic monomers have been deleted from the group of monomers that are used in making the pre-crosslinked polymer particles now called for in claim 1 of the subject patent application. The teachings of Castner do not render obvious such pre-crosslinked polymer particles which are comprised of repeat units from acrylate monomers, acrylonitrile monomers, or vinyl halide monomers. The teachings of Castner do not disclose or suggest that the pre-crosslinked polymeric polymer can be in the form of core-shell particles. The Examiner accordingly did not reject claim 16 as being anticipated or obvious over the teachings of Castner. The limitation of claim 16 has now been incorporated into claim 1 and accordingly renders it patentable over the teachings of Castner on the basis of this limitation alone.

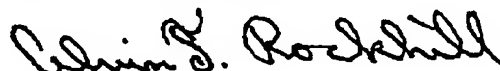
Claims 1-6, 8, 9, 11, 12, 14-17, and 19 have also been rejected under 35 U.S.C. §102(b) as being anticipated by Klesse (United States Patent 5,306,743) and claims 7, 13, and 18 have been rejected under 35 U.S.C. §103(a) as being obvious over the teachings of Klesse. However, claim 1 has been amended in a manner that renders it novel and unobvious over the teachings of Klesse. More specifically, claim 1 has been amended to call for the rubber composition being claimed to contain carbon black or silica as a filler. Klesse does not anticipate or render obvious such filled compositions. The teachings of Klesse relate to aqueous synthetic resin dispersions that are used in film forming applications. Klesse does not suggest or provide any motivation for utilizing such particle dispersions in blends with rubbery polymers. The teachings of Klesse also fail to disclose or to suggest the inclusion of carbon black or a filler in such compositions. In other words, the teachings of Klesse fail to disclose or suggest two out of the three constituents of the composition called for in claim 1.

Claims 1-12, 14 and 15 have been rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of Castner. However,

the claims now pending in the subject patent application are not obvious over the teachings of Castner. It should be noted that the limitation of claim 16 calling for the pre-crosslinked polymer to be in the form of core-shell particles was incorporated into claim 1 and that claim 16 was not rejected on the basis of obviousness type double patenting. Accordingly, the double patenting rejection has been rendered moot on the basis of this added limitation alone.

It is believed that the amendments made place all of the claims pending in the subject patent application in a condition for allowance and such an allowance is respectfully requested.

Respectfully submitted,



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